

Appendix A

ABSTRACT OF THE INVENTION

A multi-point electrical probe for testing location-specific electrical properties on circuit boards. Four generally parallel, electrically conducting probe arms are produced preferably by wafer-based techniques, although any even number of probe arms between two and 64 may be used. The precision of wafer-based manufacturing techniques permits miniaturization beyond that which is conventionally obtained by assembling discrete components. The probe arms are generally flexible, and may be shaped suitably to accommodate a particular circuit geometry. The probe and/or the sample under test may be precisely located by suitable translation and/or rotation stages, which may optionally be placed under computer control. A suitable wiring diagram is provided, and preferable manufacturing techniques are discussed. In addition, the conducting probe arms benefit from active guarding, which reduces leakage resistance and increases the measuring accuracy of the probe, by the inclusion of electrically-isolated conducting regions located between the probe arms.